## (19) World Intellectual Property **Organization** International Bureau



# 

### (43) International Publication Date 20 January 2005 (20.01.2005)

# (10) International Publication Number WO 2005/004792 A2

(51) International Patent Classification7:

**A61K** 

(21) International Application Number:

PCT/US2004/016784

(22) International Filing Date:

27 May 2004 (27.05.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data: 60/482,130

24 June 2003 (24.06.2003)

(71) Applicant (for all designated States except US): NOBEX CORPORATION [US/US]; P.O. Box 13940, Research Triangle Park, NC 27709-3940 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): KOSUTIC, Gordana [--/US]; 6425 Secret Drive, Raleigh, NC 27612 (US). EKWURIBE, Nnochiri, N. [NG/US]; 216 Coltsgate Drive, Cary, NC 27511 (US). PRICE, Christopher,

H. [US/US], 200 Commons Way, Chapel Hill, NC 27516 (US). ANSARI, Aslam, M. [-/US]; 19651 Club Lake Road, Montgomery Village, MD 20886 (US). ODEN-BAUGH, Amy, L. [US/US]; 4023 Quail High Boulevard, Morrisville, NC 27560 (US).

(74) Agent: MYERS BIGEL SIBLEY & SAJOVEC, P.A.; P.O. Box 37428, Raleigh, NC 27627 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),

[Continued on next page]

(54) Title: MIXTURES OF CALCITONIN DRUG-OLIGOMER CONJUGATES AND METHODS OF USE IN PAIN TREAT-MENT

20 percent or more. Moreover, the mixture may be more effective at surviving an in vitro model of intestinal digestion than non-conjugated calcitonin. Furthermore, the mixture may exhibit a higher bioavailability than non-conjugated calcitonin. The compositions of this invention are useful in the treatment of various bone disorders and pain.

# WO 2005/004792 A2

European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

# Published:

 without international search report and to be republished upon receipt of that report